

Serial No.: 09/543,236

Attorney Docket No: MCS-008-00

IN THE CLAIMS

Please amend claims 2, 3 and 18.

Please cancel claims 1, 12-17, 19 and 20 without prejudice.

1. (Canceled)

2. (Currently Amended) ~~The method of claim 1,~~ A method of determining a relative position and orientation between a base camera and a non-base camera, comprising:
measuring a path of an object with the base camera in a base coordinate frame;
measuring the object path with the non-base camera in a non-base coordinate frame;
calculating transformation parameters based on the object path; and
applying the transformation parameters to the object path measured by the non-base camera such that the object path measured by the non-base camera is expressed in the base coordinate frame;

wherein the object path is a path of a person moving around a scene.

3. (Currently Amended) The method of claim 4 2, wherein calculating transformation parameters comprises performing matching of data measured by the base and non-base cameras.

4. (Original) The method of claim 3, wherein data matching is used to solve a set of transformation equations.

5. (Original) The method of claim 4, wherein data matching comprises selecting a time value and matching points of the object path as measured by the base camera at the time value with points of the object path as measured by the non-base

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camera at the time value.

6. (Original) The method of claim 5, wherein interpolation is used to generate a data point at the time value if no data point was measured at the time value.

7. (Original) The method of claim 3, further comprising using an error minimization technique to determine transformation parameters with the least amount of error.

8. (Original) The method of claim 7, wherein the error minimization technique is a least squares solution.

9. (Original) The method of claim 7, wherein the error minimization technique is a least median of squares solution.

10. (Original) The method of claim 3, further comprising applying a time offset to data from at least one of the base and non-base cameras to correct for unsynchronized data between the base and non-base cameras.

11. (Original) The method of claim 10, wherein a set of time offset value and corresponding transformation parameters are calculated and an error minimization technique is used to determine the time offset value with the least amount of error.

Claims 12-17: (Canceled)

18. (Currently Amended) ~~The method of claim 16,~~ A method of measuring a relative pose between two cameras, comprising:

selecting a time offset value corresponding to a time shift between the two cameras;

calculating a transformation parameter using the time offset value, the transformation parameter capable of transforming data in a coordinate frame of one of the

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two cameras into a coordinate frame of the other of the two cameras so as to obtain the relative pose; and

applying the time offset value to data from at least one of the two cameras;

wherein a plurality of time offset values are selected and a corresponding transformation parameter is calculated for each of the plurality of time offset values, with one of the plurality of time offset values chosen as a most correct time offset based on an error function;

wherein the error function includes a least median of square technique.

19. (Canceled)

20. (Canceled)